

Remarks Regarding Claims

102(e) Rejections

Claims 1-16 and 18 have been rejected under 35 U.S.C. 102(e) as being anticipated by Welker-US 2004/0099068, hereinafter "Welker." The applicant respectfully traverses the examiner's rejection by offering the following remarks.

Welker proposes that the primary problem his apparatus solves is the need for a monolithic sample cylinder apparatus that will reduce the potential for leaks. Welker par [6]. This contrasts with the present invention in that the container enclosure is composed of two components, a body, and a mountable body cap. The dual component container allows access to the interior of the body in order to seat the valves. The sealing mechanism in the present invention has exhibited no leakage problems. In further pursuit of his monolithic structure, Welker allows the valves to be mounted directly in the cylinder. Welker par[7]. This contrasts with the present invention which uses independent demountable valves including, of course, the valve bodies. This is further illustrated in Welker par [20] when it is stated that the threaded portion of the valve "is attached directly to the cylinder wherein the cylinder functions as a valve housing for the valve assembly and valve body." The effort to mount valves directly into the cylinder has required Welker to dramatically thicken both cylinder ends. This results in a significant increase in weight of the cylinder which is a distinct disadvantage in this industry where the majority of sample testing is performed offsite, requiring shipping of the sample containers. Another distinction is that in the present invention the valves are self contained and can function independently from the cylinder or body of the container. If the valves in Welker are removed they cannot independently function apart from the cylinder. It is thus believed that the present invention is distinct and not anticipated by Welker.

Without waiving applicant's traverse, the applicant amends Claim 1 to recite a "body" and "mountable body cap" emphasizing the distinction between the monolithic structure of Welker and the present invention. The applicant has further recited "demountable pin activated valve assemblies." As seen in new Claim 19, the valve assemblies include a distinct and independent valve housing. A demountable independent valve is not demonstrated in Welker since the cylinder itself is the valve body.

Claim 2

Without waiving traverse, the applicant has amended Claim 1 to incorporate the description of materials. Claim 2 has been canceled.

Claim 3

The Examiner suggests Welker shows a first and second valve on each end of the container. The present invention exhibits a first valve mounted on one end of the container, however, distinct from Welker, the second valve is disposed through the mountable body cap. Thus it

is believed the two valve array of Claim 3 of the present invention does not anticipate Welker valve structure.

Without waiving traverse the applicant has amended Claim 3 to recite that the “second demountable pin activated valve assembly” along with its independent valve, is connected to the “mountable body cap.”

Claim 4.

The applicant has indicated the valves are self sealing. The examiner has pointed out that the valve seats in Welker appear to be of polymeric material indicating they are self sealing. The portions of valve assemblies that meet and form a closure may be made of many types of materials such a polymer, rubber or metal and all materials seal. The applicant suggests that it is the mechanism of operation, i.e. closure, that produces the self sealing effect rather than the type of material of which the valve is constructed. . The valves in Welker are threaded screw type valves and must be manually twisted close. In the present invention once a force has been released from the pin the valve closes automatically and thus self seals. This is not seen in Welker.

Without waiving traverse, the applicant has amended Claim 4 to recite that the valve automatically closes and thus is self sealing “upon release of said force” upon the pin. New Claim 19 has specified the demountable pin activated valve as being composed of not only a valve housing but a “sealing pin” disposed within the valve housing. These amendments clarify that it is the mechanism that is the self-sealing aspect.

Claim 5.

The examiner has suggested that Welker discloses a plunger. Considering the common definition of a plunger as being a piston-like part reciprocating or sliding within a body, it can be seen that the valves of the Welker application cannot reciprocate within the independent valve housing. Welker’s valve closure mechanism is a threaded screw type mechanism that twists and does not slide. The present invention shows a pin that reciprocates or slides within the independent valve housing, a mechanism not seen in Welker.

Without waiving traverse, the applicant has amended Claim 5 to recite that the demountable pin activated valve assembly is “activated by said pin being slidably disposed within said valve housing” thus emphasizing the distinction between valve activation in Welker and the present invention.

Claim 6.

In Claim 6, the examiner has suggests that Welker discloses ends that can be opened or closed as desired by function of the valves. In the applicant’s device, the body ends are not open or closed by function of the valve but by make up of the body itself. In its functional form, the body or cylinder of Welker can neither said to be open or closed because it’s state of being open or closed is valve dependent. It the present invention, one end of the body is

open, capable of receiving the mountable body cap and the other end is a closed irrespective of the status of the valves.

Without waiving traverse the applicant has amended Claim 1 to include a “body, “a first body end” and a “second body end” thus specifying the parameters of the body or cylinder. The applicant has further amended Claim 6 to recite a “first body end” which is closed and a “second body end” that is open, emphasizing that being open or closed is a function of the physical state of the body and not the status of the valves.

Claim 7 Claim 7 has been canceled.

Claim 8 Claim 8 has been canceled.

Claim 9

The Examiner has suggested that Welker exhibits end walls that have a rounded or rolled lip type configuration. The term “rolled” in the context of working with metal in sheet form suggests that the sheet is actually bent in a fashion similar that rolling up a sheet of paper. This is seen in the present invention, and not in Welker. In Welker a curvature of the cylinder head rather than the cylinder walls is shown. This is predominately a cosmetic shaping and serves no functional purpose. In Welker the edges could very well have been square with no functional disadvantage to the operation of the device. In the present invention, the rolling of the walls of the container second body end, actually form a seat upon which the mountable body cap is disposed.

Without waiving traverse the applicant has amended Claim 9 to recite that the “second body end exhibits a “rolled body cap seat” to clarify the functional nature of the feature.

Claim 10. The Examiner has suggested that Welker shows a cap. It appears that this is part of the valve that is threaded into the cylinder head and does not represent a second component of the body or cylinder as in the present invention.

Without waiving traverse, the applicant has amended Claim 1 to recite a mountable body cap to emphasize the cap is a second distinct component of the body or cylinder as opposed to a part of the valve. Claim 10 has been canceled.

Claim 11

The Examiner has suggested that Welker exhibits a hex head with an expanded diameter portion or flange which can be considered partially rolled in that it is rounded where the hex head overlies seal element 46. The applicant has examined Fig. 2 and Fig. 3 in Welker and believes that hex head 53 where it meets seal element 46 is square, as is the cylinder head valve port 7. To reiterate, in the context of working with metal in sheet form, rolling generally suggests forming such as seen when paper is rolled. A partially rolled flange would then suggest forming in a similar fashion however, the roll is not complete in forming a joined circumference.

Claim 12

The Examiner has stated that Welker shows the hex head/flange is formed over the rolled lip of end walls 20/21. If the Examiner suggests that the rolled lip is that feature of Welker discussed in Claim 11, the applicant incorporates the arguments presented in the remarks relative to that claim. If the Examiner suggests the rolled lip is that feature discussed in Claim 9, the applicant incorporates the arguments set forth in the remarks regarding that claim. Further, the applicant points out that in the present invention the partially rolled flange is designed to be a feature that assists in retaining the mountable body cap within the second body end in conjunction with the rolled body cap seat. The partially rolled flange is partially rolled or formed around and over the upper part of the rolled body cap seat, and continues to be formed and partially rolled under the edge of the rolled body cap seat thereby retaining the cap within the second body end. This mechanism is not seen in Welker.

Without waiving traverse, the applicant has amended Claim 23 which depends from Claim 9 to further define the rolled body cap seat as comprising an annular ring. This is a feature not seen in Welker. To further define the retention mechanism, the annular ring of the rolled body cap seat is defined as having an upper surface and a lower surface. Then turning back to Claim 11, the applicant further amends to show the extension of the partially rolled flange over the upper surface of said annular ring on said lower surface (underneath) the annular ring. The claim further indicates that the function is to retain the mountable body cap within said second body end. It is believed these amendments clarify the present invention's distinctions over Welker.

Claim 13

The applicant incorporates the arguments set forth above in the remarks associated with Claim 11. The applicant does not believe Welker shows partial rounding of the hex head nor of the cylinder head port.

Without waiving traverse, Claim 11 has been amended to include a seal with Claim 11 further describing the sealing mechanism between the partially rolled flange and the rolled body cap seat. Claim 13 has been canceled.

Claim 14.

The applicant incorporates the arguments set forth above in the remarks section associated with Claim 11 as it regards the suggestion there is a rolled lip in Welker. Further, in the present invention, the entire valve is disposed through each of the independent components of the body, i.e., the mountable body cap and the closed first body end. In Welker it is the valve stem that is mounted within the aperture of the hex head which is actually part of the valve and not the body.

Without waiving traverse, the aperture eliminated by the incorporation of a description of the disposition of the valves as recited in new Claim 22 and amended Claim 3. Claim 14 is canceled.

Claim 15.

The Examiner suggests Welker shows two valves extending through hex heads. As recited earlier, the hex heads are a valve component in Welker where in the present invention the valves themselves are disposed through two independent components, i.e., the body cap and the closed body end. Claim 15 specifically identifies the second component as a cap.

Without waiving traverse, the applicant has further defined the mechanism of disposition of the valves by amending Claim 3 and adding new Claim 22. Claim 15 has been canceled..

Claim 16

The Examiner suggests that Welker exhibits a threaded section of the hex head that extends within in the opening and below the rolled lip wall. The applicant incorporates the arguments set forth regarding the lip wall as set forth in Claims 9 and 11. It is important to note that in the present invention the mountable body cap walls extend below the annular ring. This is a precursor to the additional mounting, retaining and sealing mechanism recited in Claim 17 of the expanded lip created when the body cap walls are press formed outward and under the undersurface of the annular ring. No such retention mechanism is seen in Welker where the valves are retained with threads.

Without waiving traverse, applicant has amended Claim 16 to further define the mechanism referred to in the remarks on Claim 16. To further define this mounting, retention and sealing mechanism the mountable body cap has been defined by further components in Claim 11 wherein a body cap base and body cap walls are recited. In Claim 23, depending from Claim 9, the applicant has further defined the annular ring as having a circumference less than that of body. Thus when the lip is press formed in the body cap walls, the lesser circumference of the annular ring retains the mountable body cap within second body end.

Claim 17.

The Examiner has indicated that Claim 17 is allowable subject to the 35 U.S.C. 112 objection. Thus this claim is discussed in that section of these remarks.

Claim 18

It is suggested that Welker has a fluid extraction device in the form of pressure release valves. It should be noted that the pressure release valves which are a safety device are activated only when there is excess pressure in the cylinder and not as a means of extracting samples. Claim 18 has been canceled.

35 U.S.C. 102(b) Rejections.

Claims 1-9 have been rejected under 35 U.S.C. 102(b) as being anticipated by Proudman, US Patent # 2, 298,627, hereinafter "Proudman." The applicant respectfully traverses the examiner's rejection by offering the following remarks.

Claim 1

The Examiner suggests that Proudman exhibits a container with ends and valves. Proudman describes a trap mechanism in which the container is lowered into the fluid to be sampled. This is distinct from the present invention in which the container is not lowered into the medium to be sampled. In Proudman, the valves are an integral part of the container walls and are not independent nor demountable as seen in the present invention where independent valves are disposed through separate and distinct body components.

Claim 2

The Examiner states that the container in Proudman appears to be metal. However, upon examination of the reference the applicant finds discussion of the nature of the valve seats as being of resilient material but finds no reference to the material component of the container.

Without waiving traverse, the applicant has amended Claim 1 to incorporate the description of materials. Claim 2 has been canceled.

Claim 3

The Examiner suggests Proudman shows a first and second valve on each end of the container. The present invention exhibits a first valve mounted on one end of the container, however, distinct from Proudman, the second valve is disposed through the mountable body cap. Thus it is believed the two valve array of Claim 3 of the present invention does not anticipate Proudman's valve structure.

Without waiving traverse the applicant has amended Claim 3 to recite that the second independent valve, is connected to the "mountable body cap."

Claim 4

The Examiner has indicated Proudman suggests the valve seats are made of resilient material and that they securely seal the valve. By definition every valve must seal.

Without waiving traverse, the applicant has amended Claim 1 to recite the valves are demountable which is repeated in amended Claim 4. Further the applicant has amended Claim 1 to recite the two distinct components of the body as well as the material composition of the body. It is suggested these amendments make the present invention distinct from Proudman.

Claim 5

The Examiner indicates that Proudman shows a plunger rod for activating the valves. Proudman, being a trap exhibits valves which are opened and closed simultaneously

New Claim 20 and new Claim 21 depending from Claim 3 recite demountable valves, distinct from Proudman. Claim 20 recites a valve assembly that may be opened by activating the pin by opposing forces in opposing directions. This of course allows the present invention to be mounted inline with a fluid or gas flow and demounted to be shipped for analysis. This is a dramatic distinction between the present invention and Proudman. In Proudman the valves may be activated only by force in one direction. Valves may be simultaneously activated only by force in one direction. This emphasizes the fundamental purpose and distinction of Proudman as opposed to the present invention. Proudman is merely a trapping device. A trap wherein the sampler is emersed in the fluid to be sampled and the valves being activated by a force in one direction trap the enclosed fluid. The present invention is specifically designed a s flow through device wherein the fluid passes through the sampling container as opposed to being emersed within it. The opposed opening of valves in the present invention solves a problems not anticipated by Proudman. If the valves are opened, the sample is contaminated by sample collected and retained above the upper most valve 46. No such contamination prospect is observed in the present invention due to the valves being opened in opposing directions.

Claim 21 recites valves that may be opened independently for uncontaminated sample extraction. This is not seen in Proudman where both valves must be opened simultaneously with resulting sample contamination.

Without waiving traverse, the applicant has amended Claim 5 to recite demountable valves and have added Claims 20 to recite that the valves are opened in opposing directions and Claim 21 reciting that the valves may be opened independently. None of these features are exhibited in Proudman.

Claim 6

The Examiner suggests that in Proudman one head forms a closed end and the other head forms an open end. It is suggested that the lower end in Proudman is only closed when the valve is closed. In the present invention, one end of the body is described as closed and one end open to accept a cap. Unlike Proudman, this is true independent of the status of the valves. In Proudman, the upper end is not open in relation to the interior, sample containing portion of the body. The upper end in Proudman can be said to be perforated above the upper valve and not open to the body when the upper valve is closed. When the upper valve in Proudman is open, the container end is permanently open. In the applicant's device the second body end is open for the purpose of accepting the mountable body cap which fully seals the container.

Without waiving traverse, the applicant has amended Claim 6 to recite that the “second body end is open wherein said mountable body cap may be sealably disposed therein” thus emphasizing the purpose of the open second body end which is to accept a cap.

Claim 7

Claim 8

Claim 8- Probably Claim 9 (Rolled lip.)

It appears that by referencing a rolled lip, the Examiner is actually referring to Claim 9 in the application which deals with the rolled lip. Claim 8 deals with the valve being disposed within a circular aperture. The Examiner has suggested that Proudman exhibits a solid bottom 18 that exhibits a rolled lip. This is the seat upon which the valve rests and it appears to be flat to allow more surface area to contact the valve. If the valve seat were rounded, it would have only made contact with the valve tangentially. In the present invention, the term “rolled” in the context of working with metal in sheet form suggests that the sheet is actually bent in a fashion similar to that of rolling up a sheet of paper. This is seen in the present invention, and not in Proudman. In the present invention, the rolling of the walls of the container second body end, actually form a seat upon which the mountable body cap is disposed.

Without waiving traverse the applicant has amended Claim 9 to recite that the “second body end exhibits a “rolled body cap seat” to clarify the functional nature of the feature.

35 USC ¶112 Rejections

The examiner has rejected claims 1-18 on the basis of 35 USC 112 as being indefinite.

Claim 1

The examiner indicates that the preamble of Claim 1 is drawn to a container while the body of the claim recites a plurality of valves “connected to” the container. The examiner feels it is unclear the combination of a container and valves is being claimed or just the container itself as indicated in the preamble.

In order to clarify the claim the applicant has amended the “plurality” section of the body of Claim 1 to read “Said container further comprising a plurality”. This should clarify the claim to indicate that the valves are a part of the container that is being claimed. The examiner has also felt it is unclear whether the container is just for sampling or has other uses. The applicant has amended the first sentence of Claim 1 to recite “A sampling container” which should clarify the claim.

Claim 3

The examiner has indicated that it is unclear if the first and second valves in Claim 3 are in addition to the plurality valves of Claim 1.

The applicant has amended the first sentence of Claim 3 to read “The sampling container of Claim 1 wherein said plurality of valves further comprises”. The specific reference to the plurality of valves should clarify the claim.

Claim 4

The examiner indicates the claim recites intended usage without specifying structure.

The applicant has amended Claim 4 to include demountable pin activated valve assemblies and have indicated the valves are now self-sealing “upon release of said force upon said sealing pin” the antecedent basis for self-sealing pin will be found in new claim 19 depending from Claim 1 specifying structure of the valve assemblies as comprising a valve housing and “a sealing pin slidably disposed of within valve housing”. It is believed this will provide the necessary structure to overcome the 112 objection.

Claim 11

The examiner states it is unclear what is meant by “exhibits a partially rolled flange.

The applicant has amended Claim 11 to recite specific components of the mountable body cap and goes on to recite that “said mountable body cap further comprises a body cap base through which said mountable pin activated valve assembly is sealably disposed, body cap walls, said body cap walls forming a partially rolled flange.” The applicant has deleted the word exhibits and has specified from which portion of the mountable body cap the partially rolled flange is composed. It is believed this clarifies Claim 11.

Claim 12

The examiner has indicated that it is unclear how the rolled flange can be formed around and under the lip as well as being retained over the said rolled lip.

To clarify Claim 12 the applicant has added the new Claim 23 which depends from Claim 9 and specifies that said rolled body cap seat comprises an annular ring. New claim 23 goes on to specify that the annular ring has an upper surface and a lower exterior surface. This in combination with the amended Claim 12 which states that the partially rolled flange is extended over said upper surface of said annular ring and onto said lower exterior surface of annular ring to an extent whereby said mountable body cap is retained within said second body end.” The applicant has removed the language “ is formed around and under said rolled lip” and has removed the language “ over said rolled lip” It is believed the amendments make the mechanism of retaining the mountable body cap within the second body end clear.

Claim 13

The Examiners indicates that the “seal” of Claim 1 is different that that of Claim 11.

The applicant has canceled Claim 13 however the applicant has also clarified the issue of the seal by, further amended Claim 11 to recite a single seal which is disposed between the partially rolled flange and said rolled body cap seat. This appears in the second to the last sentence of Claim 11.

Applicant has further amended Claim 11 in the first and second sentences to state that the container of Claim 1 further comprises a seal.” The remainder of Claim 11 specifically the last two sentences of Claim 11 recite the location of the seal by an amendment indicating that ‘said seal is disposed between said partially rolled flange and said rolled body cap seat.’ It is believed this clarifies the antecedent basis of seal in Claim 11.

Claim 13

The examiner has indicated Claim 13 lacks period.

The applicant has canceled Claim 13.

Claim 15 The examiner asks if a second valve in addition to that in Claim 3 and those of Claim 1 is implied by the “a” ?

The applicant has canceled Claim 15 which will resolve the question regarding the clarification however the applicant wishes to state that the plurality of valves recited in Claim 1 has been modified to suggest two valves.

Claim 17

The examiner states that “said cap wall” on line one of Claim 17 lacks antecedent basis.

The applicant now believes that with the addition of the direct recitation of body cap walls in Claim 11 that Claim 11 now provides antecedent basis for all references to body cap walls including Claim 17.

Claim 18 The examiner indicates it is unclear from disclosure what additional means are being claimed as the “float extraction or injection means”.

The applicant has canceled Claim 18 which would resolve this objection.

Allowable Subject Matter

The examiner has indicated that Claim 17 would be allowable if written to overcome the objections under 35USC 112. Please refer to the amendments above to Claim 17.

References Cited in PTO-892

The applicant has reviewed all references cited in PTO-892 and believes they all yield to the analysis provided regarding Welker and Proudman. The applicant further believes that the amendments made herein make the present invention patentable distinct from and non-obvious over all references cited in PTO-892.

Remarks Regarding the Specification

The applicant has amended the specification merely to reflect the changes in the descriptive language used in the claims with one exception. The applicant is now reciting 17A to be the annular ring lower internal surface. This occurs on page 9 of this paper four lines above the beginning of the second paragraph.

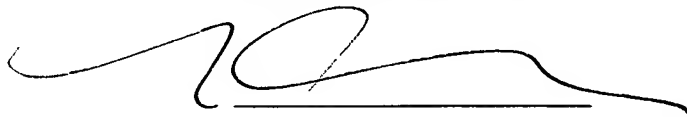
Remarks Regarding the Drawing

The drawing has been amended to show the location of Item 17A. Please see the annotated drawing for the location.

CONCLUSION

It is believed that no new matter has been added to this application either in the claims, specification or drawing. The applicant has made a bona fide attempt to answer each point raised by the Examiner. It is believed that the present invention is now patentably distinct from all prior art and applicant respectfully request the application is now in condition for allowance.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Michael L. Antoline', written over a horizontal line.

Michael L. Antoline
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